

---

---

# **BULLETIN**

of the

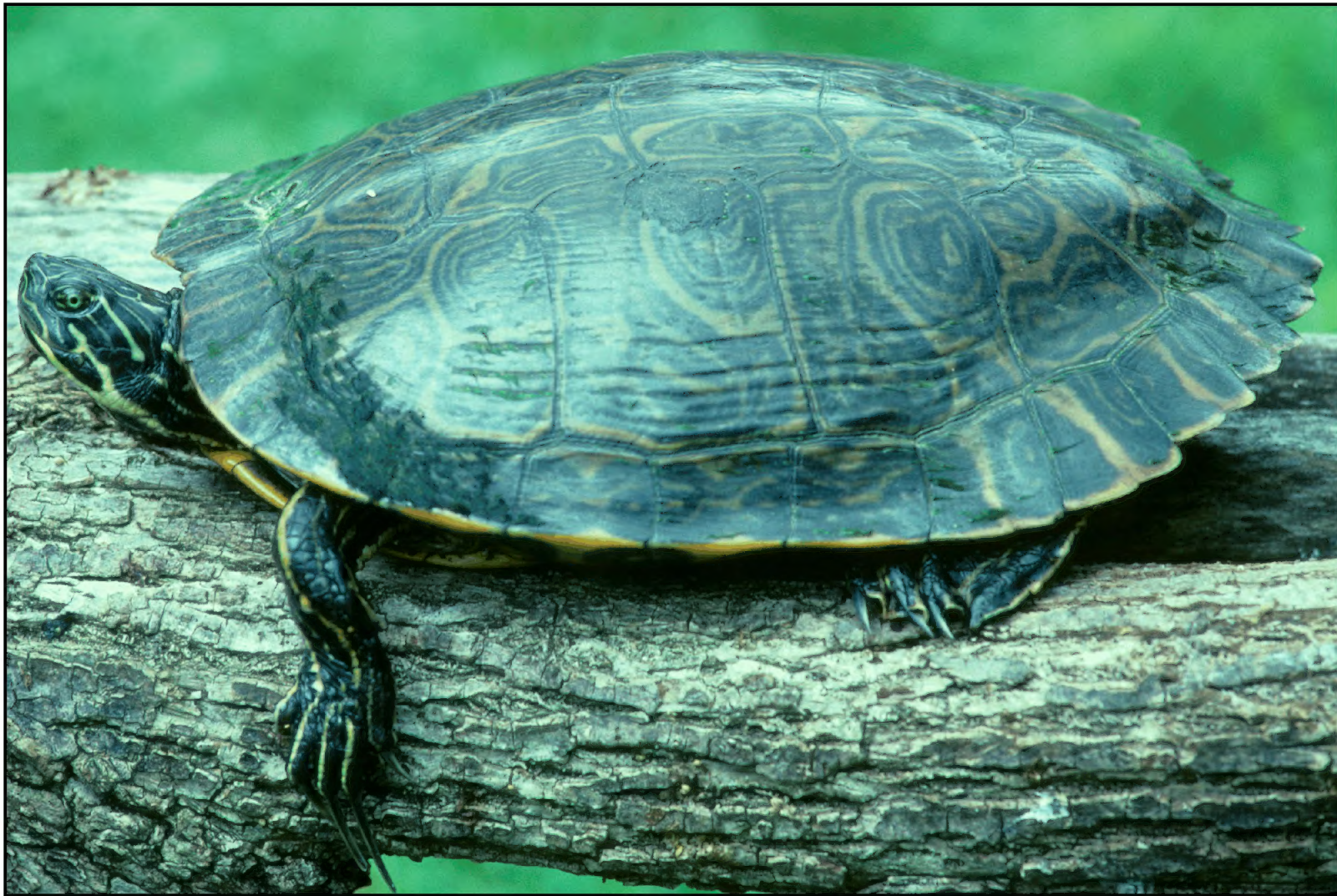
# **Chicago Herpetological Society**

---

---



**Volume 48, Number 4**  
**April 2013**





# BULLETIN OF THE CHICAGO HERPETOLOGICAL SOCIETY

## Volume 48, Number 4

### April 2013

|                                                                               |               |    |
|-------------------------------------------------------------------------------|---------------|----|
| Serendipitous Sightings of <i>Pseudemys</i> in Southern Illinois . . . . .    | John G. Palis | 49 |
| Book Review: <i>Thirty Seconds before Midnight</i> by Helen J. Beal . . . . . | David S. Lee  | 52 |
| Frog City: IV. Mom's Minks . . . . .                                          | Ilene Sievert | 53 |
| What You Missed at the March Meeting . . . . .                                | John Archer   | 56 |
| Herpetology 2013 . . . . .                                                    |               | 59 |
| Unofficial Minutes of the CHS Board Meeting, March 15, 2013 . . . . .         |               | 62 |
| Advertisements . . . . .                                                      |               | 63 |
| News and Announcements: Indianapolis Zoo Trip . . . . .                       |               | 64 |

**Cover:** Adult male river cooter, *Pseudemys concinna*, carapace length 25.0 cm. Photographed in Johnson County, Illinois, on 23 May 2003 by John Palis.

#### STAFF

Editor: Michael A. Dloogatch—madadder0@aol.com  
Advertising Manager: Ralph Shepstone

#### 2012 CHS Board of Directors

Jason Hood, President  
Cindy Rampacek, Vice-President  
Andy Malawy, Treasurer  
Jenny Vollman, Recording Secretary  
Stephanie Cappiello, Corresponding Secretary  
Aaron LaForge, Publications Secretary  
Mike Dloogatch, Membership Secretary  
Jim Foster, Sergeant-at-arms  
Josh Baity, Member-at-large  
Lawrence Huddleston, Member-at-large  
Nancy Kloskowski, Member-at-large  
Linda Malawy, Member-at-large

**The Chicago Herpetological Society** is a nonprofit organization incorporated under the laws of the state of Illinois. Its purposes are education, conservation and the advancement of herpetology. Meetings are announced in this publication, and are normally held at 7:30 P.M., the last Wednesday of each month.

**Membership** in the CHS includes a subscription to the monthly *Bulletin*. Annual dues are: Individual Membership, \$25.00; Family Membership, \$28.00; Sustaining Membership, \$50.00; Contributing Membership, \$100.00; Institutional Membership, \$38.00. Remittance must be made in U.S. funds. Subscribers outside the U.S. must add \$12.00 for postage. Send membership dues or address changes to: Chicago Herpetological Society, Membership Secretary, 2430 N. Cannon Drive, Chicago, IL 60614.

**Manuscripts** published in the *Bulletin of the Chicago Herpetological Society* are not peer reviewed. Manuscripts should be submitted, if possible, on IBM PC-compatible or Macintosh format diskettes. Alternatively, manuscripts may be submitted in duplicate, typewritten and double spaced. Manuscripts and letters concerning editorial business should be sent to: Chicago Herpetological Society, Publications Secretary, 2430 N. Cannon Drive, Chicago, IL 60614. **Back issues** are limited but are available from the Publications Secretary for \$2.50 per issue postpaid.

**Visit the CHS home page at** <<http://www.Chicagoherp.org>>.

**The Bulletin of the Chicago Herpetological Society** (ISSN 0009-3564) is published monthly by the Chicago Herpetological Society, 2430 N. Cannon Drive, Chicago IL 60614. Periodicals postage paid at Chicago IL. **Postmaster:** Send address changes to: Chicago Herpetological Society, Membership Secretary, 2430 N. Cannon Drive, Chicago IL 60614.



## Serendipitous Sightings of *Pseudemys* in Southern Illinois

John G. Palis

Palis Environmental Consulting

P.O. Box 387

Jonesboro, IL 62952

jpalis@yahoo.com

Serendipity, as defined by the Oxford American Dictionary, is “the making of pleasant discoveries by accident” (Ehrlich et al., 1980). Herein I describe my two serendipitous encounters, nearly 10 years apart, with river cooters (*Pseudemys concinna*) in southern Illinois.

The river cooter is a large emydid turtle attaining a carapace length of up to 37.5 cm (Conant and Collins, 1991), with the largest Illinois specimen measuring 32 cm long (Phillips et al., 1999). It is a southern species, inhabiting large rivers, their tributaries and backwaters, from eastern Texas, Oklahoma, and southeastern Kansas eastward to Georgia, the Carolinas and Virginia.

River cooters were first reported from Illinois by Garman (1890). Apparently never common in Illinois (Garman, 1892), the species was once thought to be extirpated from the state (Morris et al., 1983). However, results of focused surveys by Don Moll in the late 1980s, combined with incidental sightings, verified the continued existence of river cooters in Illinois (Moll and Morris, 1991). Most recent sightings have been in floodplain lakes and ponds of the Ohio and Wabash River systems of southeastern Illinois (Dreslik, 1997, 1998; Dreslik et al., 2003; Moll and Morris, 1991; Readell and Phillips, 2008). Sightings in the Mississippi River drainage are much less common, and for several counties, are many decades old (Phillips et al., 1999). Due to its scarcity and human modification of its habitat, the river cooter is listed as Endangered in Illinois (Phillips et al., 1999).

### Sighting #1

Every spring from 2001 through 2004, I studied amphibian and reptile usage of three recently constructed wetlands on The Nature Conservancy's Grassy Slough Preserve near Belknap, in Johnson County (Palis, 2007). I sampled the herpetofauna using a variety of techniques including funnel-trapping at drift fences, coverboard sampling, visual encounter surveys, nocturnal frog-call surveys, and hoop net trapping (for turtles). I also kept tally of species encountered incidental to survey activities, such as those encountered while going from one wetland to another.

On 23 May 2003, I spent a lovely morning checking funnel traps and coverboards at all three wetlands. Captures were few, consisting of a half dozen cricket frogs (*Acris crepitans*), a juvenile cottonmouth (*Agkistrodon piscivorus*), and an adult black racer (*Coluber constrictor*). During the afternoon, I conducted visual encounter surveys of two wetlands. Wetland visual encounter surveys consisted of walking and wading for two hours along the shoreline and in near-shore waters, dipnet in hand and binoculars hanging from my neck, recording the number of individuals of each herpetofaunal species I encountered. Wetland surveys yielded sightings of hundreds of frogs

and tadpoles, a single small-mouthed salamander (*Ambystoma texanum*), several red-eared sliders (*Trachemys scripta*) and painted turtles (*Chrysemys picta*), and three copperbelly water-snakes (*Nerodia erythrogaster neglecta*). After completing my survey of the second wetland, I strolled back towards my car on the sparsely vegetated ground below the long, low earthen dam. At 1730 h, I walked up on a large emydid turtle, motionless and oriented towards the wetland. As I passed by I made a mental note, “female red-eared slider.” Something about this turtle, however, gave me pause; the claws on the front feet were extremely long. Long foreclaws are indicative of mature male red-eared sliders who use them to titillate females during courtship. But male red-eared sliders don't get as large as this turtle. I closely examined the turtle and realized I had discovered an adult male river cooter!

Aware of its imperiled status in the state, I documented my find with photographs. And, upon checking the range map for the river cooter in the *Field Guide to Amphibians and Reptiles of Illinois* (Phillips et al., 1999), I discovered that this turtle represented a new county record.

This sighting was extremely fortuitous. The preserve is 1123 hectares in extent (including 15 constructed wetlands) and bisected from north to south by an approximately 4.5-kilometer-long channelized stretch of the Cache River. The turtle was approximately 130 m from the river at a wetland that, until 1999, was a manicured, plastic-covered field used to grow vegetables on a large, commercial scale. The turtle and I just happened to be at the same spot, at the same time, on the same day; certainly an improbable set of circumstances. One wonders why the turtle climbed the steep clay-mud bank of the deeply-incised Cache River and wandered eastward through a field of weeds. He certainly could not have seen the wetland perched high above the river and hidden behind the earthen berm. Did he know the wetland was there, and if so, what sense(s) did he employ to detect its presence?



Adult male river cooter, *Pseudemys concinna*. Photographed in Johnson County, Illinois, on 23 May 2003 by John Palis.



## Sighting #2

Thursday, 7 February 2013 was an unseasonably warm winter day. Under a cloudless sky the air warmed to the low 60s (°F) by late morning. Winter days like these compel me outdoors. I decided to go to Horseshoe Lake in the afternoon to see if snakes were emerging from hibernation. However, as morning rolled into afternoon, the sky became progressively cloudier. Change of plans. Instead, I went to Trail of Tears State Forest, in Union County, to walk the floodplain of Clear Creek, upstream of State Forest Road. I had hoped to find floodplain pools that could be used as breeding sites by amphibians. But I was to make an even more amazing discovery.

When I first arrived at the creek, I scanned for turtles with my binoculars. I saw four adult red-eared sliders, one on a log and three on the steep, west bank. Like the Cache River, the downstream reach of Clear Creek has been channelized and transformed into a steep-sided ditch. Here, the water usually runs brown with silt; but on this day, due to little rainfall, deep water was emerald blue-green and shallow water was clear enough to see the bottom.

As I meandered upstream, periodically scanning the creek for basking turtles, I heard multiple skeins of snow geese as they flew overhead, carried northward by a warm south wind. At 1430 h, nearly 0.6 km upstream of the bridge, I spied a forked log, midstream, adorned with five basking turtles. Viewing them at a distance through my binoculars, I noticed one exceptionally large individual. To prevent disturbing them, I slowly moved closer, keeping trees between myself and the turtles. When close enough, I got on my belly and crawled toward the top of the bank. I slowly raised my head, then my binoculars . . . the big turtle was a river cooter! Like my previous sighting, this one bore the long foreclaws of a male. Because the water was not carrying a load of silt, the turtles were clean, and their colors and patterns were discernible. Unlike the melanistic adult male red-eared slider he lay behind, the cooter was quite colorful. He had multiple narrow, yellow, longitudinal head and neck stripes, and orange-yellow vertical bars on the marginal scutes of the carapace. Although not particularly clear, I could also see fine, irregular lines on the larger scutes of carapace. There was no doubt I was looking at a river cooter. But how do I document it? I pulled out a little, point-and-shoot digital camera and captured an image that included both banks of the creek, the creek itself, and small objects (i.e., the turtles) on the log. Not satisfied, I crawled away from the bank and then slowly made my way to a large bankside tree closer to the basking turtles. Reaching around the tree, I pointed the camera and captured a couple more images, of similar, unsatisfactory quality as the first.

Excited by my find, I continued my upstream trek to look for more turtles. The floodplain soon disappeared and I found myself struggling to stay vertical as I carefully traversed a steep

talus slope that dropped down into Clear Creek. I could not have negotiated the steep slope, with its loose rocks, wet leaves, and mosses, if not for tree and shrub handholds upon which I entrusted my life. The steep slope yielded a beautiful zigzag salamander (*Plethodon dorsalis*) that was exposed during an unplanned slide downslope. I subsequently found two more individuals under rocks.

My upstream jaunt yielded 64 more red-eared slider sightings, but no more cooters. I stopped and turned back at approximately 1.2 km north of the bridge. I counted a total of 75 red-eared sliders on my northward trek, nearly all of which were basking. By 1620 h I was back at the cooter log; the cooter and his slider companions had not moved.

I returned to Clear Creek, with a better camera in hand, twice in following days (9 and 11 February). The weather on these subsequent visits was cooler than the day I saw the cooter and the multitude of red-ears. Naturally, now that I was prepared to document its presence, the cooter was a no-show.

My unexpected sighting of a river cooter in Clear Creek is the first for this species in the Mississippi River drainage of Union County since Cahn's (1937) book, *The Turtles of Illinois*. A river cooter was sighted in Union County in 2006, but that turtle was in the Cache River drainage (Chris Phillips, personal communication, 2013). Like my first observation, the Clear Creek sighting was another case of being in the right place at the right time. The right time, in this case, was an especially unlikely time of year to make such an observation—mid-winter.

Interestingly, both river cooters I happened upon were males. Male aquatic turtles are more likely to make long-distance movements and colonize new habitat than females (Morreale et al., 1984; Tuberville et al., 1996). River cooters are no exception; in a study conducted in southeastern Illinois, males moved greater distances than females and one male relocated from one floodplain lake to another (Dreslik et al., 2003).

My chance encounters of river cooters in southern Illinois suggest: 1) that I am prone to stumble upon rare turtles, or 2) the species may not be as rare as generally perceived. I am inclined to accept the latter explanation over the former, and suggest that focused cooter surveys of streams and floodplain ponds and lakes within the Mississippi River drainage of southern Illinois might yield additional observations of this enigmatic turtle.

## Acknowledgments

I thank Bob Bluett, Mike Dreslik, and Chris Phillips for kindly sharing pertinent literature and information; Erin Palmer for providing the cameras; and the Illinois chapter of The Nature Conservancy for funding the survey at Grassy Slough Preserve. The Illinois Department of Natural Resources provided permit #96-17S to handle state-listed herpetofauna.

## Literature Cited

- Cahn, A. R. 1937. The turtles of Illinois. Illinois Biological Monographs 16(1-2). Urbana: University of Illinois.
- Conant, R., and J. T. Collins. 1991. A field guide to reptiles and amphibians of eastern and central North America. Boston: Houghton Mifflin.



- Dreslik, M. J. 1997. Ecology of the river cooter (*Pseudemys concinna*) in a southern Illinois floodplain lake. *Herpetological Natural History* 5(2):135-145.
- . 1998. Current status and conservation of the river cooter (*Pseudemys concinna*) in southern Illinois. Linnaeus Fund research report. *Chelonian Conservation and Biology* 3(1):135-137.
- Dreslik, M. J., A. R. Kuhns, C. A. Phillips and B. C. Jellen. 2003. Summer movements and home range of the cooter turtle, *Pseudemys concinna*, in Illinois. *Chelonian Conservation and Biology* 4(3):706-710.
- Ehrlich, E., S. B. Flexner, G. Carruth and J. M. Hawkins. 1980. *Oxford American Dictionary*. New York: Oxford University Press.
- Garman, H. 1890. Notes on Illinois reptiles and amphibians, including several species not before recorded from the northern states. *Illinois Laboratory and Natural History Bulletin* 3(10):185-190.
- . 1892. A synopsis of the reptiles and amphibians of Illinois. *Illinois Laboratory and Natural History Bulletin* 3(13):215-388.
- Moll, E. O., and M. A. Morris. 1991. Status of the River Cooter, *Pseudemys concinna* in Illinois. *Transactions of the Illinois State Academy of Science* 84(1&2):77-83.
- Morreale, S. J., J. W. Gibbons and J. D. Congdon. 1984. Significance of activity and movement in the yellow-bellied slider turtle (*Pseudemys scripta*). *Canadian Journal of Zoology* 62(6):1038-1042.
- Morris, M. A., R. S. Funk and P. W. Smith. 1983. An annotated bibliography of the Illinois herpetological literature 1960-1980, and an updated checklist of species of the state. *Illinois Natural History Survey Bulletin* 33(2).
- Palis, J. G. 2007. If you build it, they will come: Herpetofaunal colonization of constructed wetlands and adjacent terrestrial habitat in the Cache River drainage of southern Illinois. *Transactions of the Illinois State Academy of Science* 100(2):177-189.
- Phillips, C. A., R. A. Brandon and E. O. Moll. 1999. Field guide to amphibians and reptiles of Illinois. Champaign: Illinois Natural History Survey. INHS Manual 8.
- Readel, A. M., and C. A. Phillips. 2008. Survey of the river cooter (*Pseudemys concinna*) in southern Illinois. Champaign: Illinois Natural History Survey: INHS Technical Report 2008 (45).
- Tuberville, T. D., J. W. Gibbons and J. L. Greene. 1996. Invasion of new aquatic habitats by male freshwater turtles. *Copeia* 1996(3): 713-715.



**Book Review: *Thirty Seconds before Midnight* by Helen J. Beal**  
**2012. 247 pp. Carapace Books, London. ISBN-13: 978-1909354012 Hardcover \$16.00\***

David S. Lee  
The Tortoise Reserve  
PO Box 7082  
White Lake, NC 28337  
torresinc@ol.com

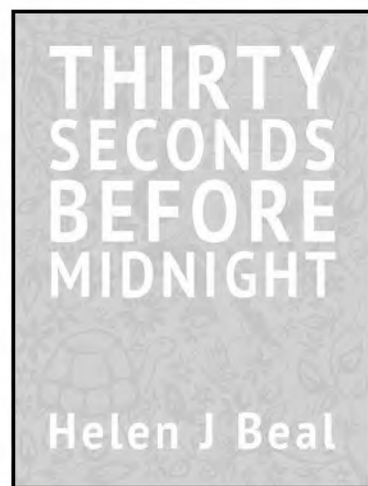
\* This and many other books and products are available at Amazon.com. If you first visit the CHS website, [www.chicagoherp.org](http://www.chicagoherp.org), and then use the Amazon icon you find there to enter Amazon's site, any purchases you make will help to support the CHS.

Okay, this book is fiction, but what the heck it's told through the perspective, of all things, a tortoise and published by a London press calling itself Carapace Books. You should take a look.

Drugs, sex and rock-and-roll, what more could one want in a book? Well let's weave into the storyline Greek mythology, any number of interesting biological concepts, numerous contrasting themes, and the questioning of old adages and the natural order of things. And just to make the story a little richer our lead character is a tortoise called Herbert.

This book is a fun read, as it questions and strengthens our understanding of life, friendships, young love, the importance of family, security, and death by providing alternative thoughts from not just Herbert, but a number of other creatures that share a threatened menagerie of a rundown English estate. The lure of fame, the contrasting promises and fears of anticipated change, and the importance of friendships are each countered with ingrained instincts and a dash of common sense. The human world of options collides with the one of limitations and dependence of those that make up the menagerie. While the evolution of the various creatures, and our personal understanding of how the world works each take time, change is often abrupt, and life, like this epic tale, is about adjustment.

The relative importance of money, status, looks, and knowledge that are brought into question by an intriguing cast of human characters, are at best topics of amusement and confusion



to those sharing the confinement of the menagerie—and by the time one finishes the book perhaps its readers as well. In the true tradition of Greek mythology the value and tragedy of life are explained while being simultaneously questioned and tested by rock-and-roll mindsets, and given meaning and purpose through the innate behaviors of the nonhuman cast.

Actually, except for the adult language and situations, this would be a great book for teaching biological concepts (true ones and a few that are otherwise) and responsibility to high school biology classes. And then there is the contrast of our human thought processes to those of more noble creatures.

The book nicely illustrates our limited 30-seconds-worth of understanding world order. For those of us maintaining collections of live reptiles perhaps Herbert can teach us a little about the creatures' total dependence on us, our responsibilities to them, and the mundane routines that they endure. There are take-home messages on nearly every page, and the astute reader will at least learn not to look back and that there is no place like home, even if you have never even been there.

For those of us maintaining assurance colonies of turtles and tortoises our ultimate goal is, of course, for them to get back home, maybe not an option for this generation of captives, but hopefully for their progeny. Still this does not give us license to maintain these creatures for decades in 35-gallon aquariums while we wait for the politics, economics, wildlife regulations, and ethics of developing nations to change. Perhaps this book can put you inside the mind of a tortoise. Most people who keep them eventually come to realize that they are a bit more astute than is generally realized.



*In fond remembrance of Ilene Sievert, who died December 16, 2012, this year we will reprint several of the essays that Ilene wrote for these pages between 1988 and 1993 under the rubric "Frog City." This one is from August 1989.*

## Frog City by Ilene Sievert

### IV. Mom's Minks

She sits alone: the companions have preceded her; she, the sole female. Her fat white belly splays from under each arm like the bosom of a stoneage venus. She's a soft down cushion plopped on the flat stone. This blobby shape is not a sign of advanced age. It was thus from maturity. The snowy full belly and throat always distinguished her fair sex from the creamy gold of the males. Above she is mud rimmed with green algae. She is the true frog of the seven plowing oxen in the northern sky, the seven stars of Ursa Major; the boreal frog, *Rana septentrionalis*; in common speech, the mink frog.

Geriatric feeding is done carefully, by hand, to spare stress and, as her aim is none too good, to spare fishing out drowned bugs. As befits her quiet life, food is light in quantity, and also incidently in color, as she gets mostly waxworms and newly shed mealworms. There's an occasional cricket for roughage—she loves them so. Her eyes, once so shining, have a faint frost, sequel of the deadly infection that left her all alone. She's not blind and will strike, though often unsuccessfully, at moving prey from 3–4 inches. How do the years demonstrate? Her inactivity is most noticeable. But perhaps present calm is the product of a previously unknown solitude?

Remarkable for muddiness in a land of deep sands is the aptly named Mosquito River. Many streams have this name but this particular small Mosquito flows to the south shore of Lake Superior. It has fairly lush vegetation, with vines, maples, and other deciduous woody plants in contrast to the pines, birches, and bracken of the humus-starved sand. On a particularly wet July afternoon seven years ago, we turned away from well-drained shore paths and hiked back to our trailhead through the soggy woods of the Mosquito, our eyes on the sun, fearing to be caught out and devoured at dusk. We walked with a neighbor family whose son is the same age as our daughter. The kids were peevish and irritable for lack of something "interesting." Actually, they were probably hungry and somewhat tired though they still danced around like demented grasshoppers. They had dashed to the edge of each precipice and waded the fast stony streams, even the ones that didn't need wading, and possibly the muddy woods and darkening air seemed boring by contrast; no peril presented itself. As we went on, a small puddle appeared here and there. Then larger puddles. Here is interest --- one could get filthy! Off they ran, yelling, towards the largest puddle, followed by the well-ignored lamentation and protest of parents. Here be interjected the Litany of Parent and Child.

**Parent:** If you wear those old gymshoes hiking you'll hurt your feet!

**Child:** No I won't.

**P:** If you run to the edge of the cliff you'll fall off and kill yourself!

**C:** No I won't.

**P:** If you jump on those slippery rocks you'll fall in the creek!

**C:** NIW

**P:** Gobble up all that food and you'll get a stomach ache!

**C:** NIW

**P:** Keep in sight or you'll get lost!

**C:** NIW

**Parent:** Come hiking with us today. You'll have a lot of fun!

**Child:** No, No, No I won't!

The child was correct on all but the last. She did, anyway.

The large muddy puddle erupted in small detonations as the children ran toward it. By the time they arrived the waters were cloudy and rippled. Nothing could be seen. As the kids prepared to wade in and grope around, a timely suggestion was made that instead, we should quietly sneak up to a different puddle about 100 feet down the trail. Nestled in the buggy slime around the little pool were myriads of identical small living clods of mud-colored frog. The flattened posture of the animals signified to me they were well aware of our presence and trusted to camouflage from the quiet and slow moving menace. Some wriggled backward into the mud and achieved partial burial. I slowly dropped down and very slowly reached over to touch one. As I gently touched he leaped cleanly into the water, did a beautiful underwater frog kick 3/4 across the puddle, and settled invisibly into the bottom. Definitely Olympic quality. For trial two, I reached more quickly and roughly to an animal close by. Before my palm swatted him the puddle exploded all over me. No clean dives here. My victim and three or four animals not previously noticed, dived noisily, spraying water and setting off several other groups around the pool. The water was murky with silt in large patches and the divers could not be seen. A hard core of cryptic hidiers remained behind.

The kids were delighted and scared off the rest to see the splashing. "Let's catch some frogs!" was the battle-cry, and off they went to scout for another undisturbed puddle. Dear Lord, return to me the speed and sharp sight of childhood. None of the adults could catch a frog by grabbing. We had no nets. The slimy mud and squishy frogs were too much for the old folks. The children combined physical skill with lack of inhibition. They filled a glass jar. My heart sank to see the jar of writhing, suffering victims. After long parley we got down to hard negotiations concerning the prisoners. The other family had already given permission to their son to take some frogs home, so I tried a least-harm strategy. The terms were: release all captives, rinse



the jar, and take only four (4) frogs, two per family. I held little hope for Geoff's two. He had already lost a toad by leaving the lid off the tank, and these creatures seemed more fragile, more likely to escape. His parents did not seem thrilled when told about live food and frequent water changes. Lo and behold, it came to pass that in the week following the camping trip, Geoff had a parakeet and we had four little frogs.

They settled in remarkably well in a 5-gallon aquarium, 1/2 full, with a corner filter, tight glass cover and stack of flat stones to sit on. My first worry, that injuries would occur from hitting the clear glass was not justified. They never struck themselves when jumping or diving. However, their ravenous appetites were alarming. The appearance of food caused a wild melee. If one had an insect and another did not, the empty frog would strike at the other's face. We installed several feeding rocks to reduce competition. All the rest of that summer they gorged and grew. The 5-gallon was replaced by 10 and then 20. Something exciting happened. Three of the four grew large eardrums and golden throats. Their forearms and thumbs thickened. They started to vocalize. And did they fight! They would rather fight than eat. The face striking and pushing became so frequent, the female cowering at the bottom of the tank, the food drowning and fouling, the water kept continually churning and splashing, that when we were offered an old ironbound 48" long aquarium we rushed to repair and set it up. Lebensraum vs. Armageddon. A couple of weeks and 5 gallons of aquarium caulk later the deluxe mink frog people's uncooperative commune was ready. The main sitting station was of flagstone stepped to overhang the water and provide several sitting levels. Another smaller station was far across the tank and had an above-water hiding nook. A large twisting piece of Mississippi driftwood threw several loops above and below the water line. A waterfall style filter, finagled to draw from a partially filled tank, poured a weak stream over some large smooth granite pebbles firmly arranged so as to break the splash. Natural pea gravel covered the bottom and hid the sea of repair caulk. We constructed the lid from aluminum angle, screen, and plexiglas. It had a sliding door on each end. A Vitalite fluorescent rested on the middle of the screen. Moss grew and upholstered the driftwood in soft rich green. Guppies were added to pick at waste.

The frogs loved it. Here one could make the long leap. What excellent watermen they were, never hitting an obstacle; diving and swimming surely to their destination. They easily climbed, with streaming flopping flippers, up onto the perches of stone or wood. They climbed the granite pebbles to sit in the flow of water. There were so many places to hide and avoid violence, if only the desire for peace were there in the male batrachian 3-chambered heart.

There was a preferred sitting spot on the lowest flagstone and the classic fight began with one male sitting in the prime place. His position would come to the attention of another male who would very deliberately swim over and climb out nearby, body tense and trembling. The first male would either immediately jump away into the water, conceding status, or remain, perhaps turning to face the challenger. Flanks of both animals would be quivering. Then one would start vocalizing, usually three to five long gra-a-a-a-acks, always ending with a staccato bark. The

other would then sing his response and turns would be taken till both males were swollen and shaking with barely repressed fury. Finally short barks were exchanged, angry curses, and they'd leap and grapple. Embracing they would rise on the rear legs, dancing, then fall and roll around, falling into the water with splashing and croaking. After a struggle one would pin the other in amplexus and utter fierce and barbaric victory barks. If things got really nasty the winner would submerge the head of the underfrog and keep it under so long that needless anxiety would drive me to interfere. After all, what happened when I wasn't watching? The loser, when he got free, would swim away under water and hide under a projection. Then with the swagger of a sumo, the victor climbed with slow and majestic arrogance onto the throne. The female did not sing or challenge, but if she were grievously provoked she could utter a soft growl. Often the fights involved all three males and they'd pop and wrestle around the tank while the prudent female stayed out of the way. Feeding always ended in a conflict of status. The sly girl would slip in and finish off the food while the silly boys played leap-frog and king-of-the-mountain.

After a time the males settled a pecking order and we named them #1, #2, and #3. The female we called "the girl," a name that persisted past youth as it does with human females. Number 2 and #3 switched order once or twice after #1 was firm in his status. He had the deepest, the loudest, the most manly croak. He would regale us on warm summer days with several series of calls. ("Can't you shut up that frog!") The other males would call too, stimulated by his call, but the higher, softer voices were easy to distinguish. Sometimes, moved to anger at the impudence of a wimpy voice, #1 would attack an inferior and put him in his place. Contrariwise, a rebel, smarting at the regal crow, would start a mutter of provoking growls and barks, often wisely leaping away before the quivering king attacked.

All had reached their full length of about 3" by the second summer and body shape changed. All became stouter, the girl with pillowy flanks and the males with even thicker arms and nuptial pads. The males, especially #1, developed dignified Mayor Daley jowls. They varied the colors of blotchy mud brown and green with shades from pale fatty chicken liver to almost black. Mood frogs. As the second winter approached with cool house temperatures, social life slowed down along with appetite. More time was spent in and under water, with eyes covered with membrane. This was a consistent winter pattern. As the third winter ended and spring started greening the grass, we woke to discover #2 had died in the night, no warning noticed. He floated, legs extended and crossed as they never are seen in life, and he sleeps under the wildflowers if a cat didn't dig him up.

We picked up a late summer juvenile mink while visiting in upstate New York. After raising it to size, seeing it develop into a healthy male, I exercised my malicious and god-like power and introduced him into the big tank. First he was terrified, but after a day of hiding he found himself. All his fighting macho mink frog glands kicked in. He knew he was a young frog, a strong frog, and he could whup those old males faster than you could say "Oedipus brek-ek-ex." Number 2 (who had been #3 before the former #2 died) gave in without a struggle, becoming once



again #3. Through habit he still was called #2. Deposing the king was more difficult. He did not go gentle. Although young male won every real all-out grappling match he never totally dominated #1, who took every advantage in snagging back bits of status. Number 1 didn't relinquish food or place without, at least, a defiant bark or growl. After young male settled into a less driven middle age the two switched dominance, back and forth.

Mom enjoyed feeding her froggies too much, enjoyed watching them crane their neckless necks at a moving mealworm, chase a cricket across the water, snap at small fish, stuff a long slimy earthworm back and back again, leap bravely and accurately at flying insects. Poor babies, sometimes a summer fly or moth would get in the house and land on the outside of their screen. Bonk, bonk, bump, bump, the dry strikes would sound against the screen, and only some diverting mealworms could erase the vision of winged bliss. They were a garden to me, a place of ease and diversion from my daily cares.

Alas, it was a dark and stormy night and I noticed a dark bruise on #2. It was under the left foreleg, a place not often revealed, and I filed a mental note. No such injury had ever been seen on any of them before. It didn't seem disabling and behavior was unchanged. Months later the mark was still there and a careful look showed the skin was smoother, more shiny, over that spot. He wore the mark a long time. Suddenly it was all down his side, smooth and reddened, and the eye on the affected side seemed half-closed and blinking with irritation. He was removed. He died.

There remained #1, young male, and the girl. We vainly hoped that it was the dead one's own and exclusive flaw and

time passed. Suddenly both males had red patching and eye involvement, a clouded "dirty" eye. The girl, separate and alone, took longer to develop symptoms. Treatment with antibiotics was too late for the males. They dropped off—old, then young. The female was checked frequently. How could she survive this corrosive plague?

Her eyes never did clear completely, those bright eyes that are the glory of the Ranidae; they have a frosty, rheumy film.

In a small tank she sits on her flat granite pebble or in the few inches of still water. She doesn't swim, jump or struggle much when captured for a water change. Her body feels too soft, flaccid, and I cannot escape the feeling of fatal contamination in her skin, her water and her tank.

Is this quiet solitude living death or a grateful retirement? Did they sit together, four froggies facing west on the rock, for sweet company or just because that place and direction made ideal perch? Of the four minks, she chose most often to be alone, but then she seemed either to have lowest status or be outside the system of competition. She has little entertainment value now. In fact, she is a sort of memento mori. Nonetheless by the grace of my sometimes merciful self, whose few powers include "terminal procedure," she will have a bed here till she must go to her long home, or I do, whichever comes first.

**Envoy:** With the sudden onset of very warm weather she stopped feeding and started floating in a dormant state. She listed like a sinking rowboat, occasionally righting herself with an awkward start. She didn't live long enough to grow thin. There were no marks on her body.



**International Herpetological Symposium  
July 31 to August 3, 2013  
New Orleans, Louisiana**

The IHS provides a yearly symposium for the dissemination of information and research pertaining to the natural history, conservation biology, captive management, and propagation of amphibians and reptiles. We hope you will join us for this very exciting meeting in New Orleans.

For more information: [www.internationalherpetologicalsymposium.com](http://www.internationalherpetologicalsymposium.com)



## What You Missed at the February Meeting

John Archer  
j-archer@sbcglobal.net

I think I've rather an average intellect that, as for most of us, has huge gaps in its filing cabinet. One of my gaps has been the inability to comprehend that real people are behind what I read and what I learn. I tend to picture ephemeral beings like a fairy godmother waving a wand and having all that written content suddenly appear. Until I became involved with your society I had not had conversations with authors or scientists. I knew they existed, as I know that the Indian Ocean and Antarctica exist, but I'd never actually had interactions with them. Mere mortals could not mingle with that class of being.

Then I got involved with the Chicago Herpetological Society. I began to meet authors. I've shared drinks with scientists. If you read any of my other writings you know that I remain in awe of both these groups and marvel at their productivity. But what I still have trouble accepting is their ordinariness; almost all are individuals willing to go that extra distance to create something that has not existed before, but after mingling with these folks I've gradually accepted that seemingly ordinary people can do extraordinary things. Gerry Salmon is an excellent example.

His bio says that he's an avid naturalist with a strong interest in herpetology and the geographic distribution of North American reptiles and amphibians. He's been a state park naturalist for New York and South Carolina, an associate of the department of herpetology at the Bronx zoo, and worked at the Miami Serpentarium in the 1980s. He's recently retired from the New York State Police and moved to Boerne, Texas. He's a volunteer curatorial assistant in the Texas Natural History Collection at the University of Texas Austin and a board member of the Southwest Center for Herpetological Research. He's also a leading authority on *Lampropeltis*, particularly *L. alterna*. He's published several articles, coauthored a book, done extensive field, laboratory, and literature research, and bred and raised many hard to keep animals. And he's done all this as a hobby. Gerry is not someone who wonders where all that knowledge comes from because he has created much of it.

He divided his talk into two parts, "Natural History of the Gray-banded Kingsnake: A Look at the Sequence of Discovery over 111+ Years" and "Herping the Texas Trans-Pecos: or rather, Various Critters in the Road . . ." and, as usual, I can only give you a general idea of what he covered.

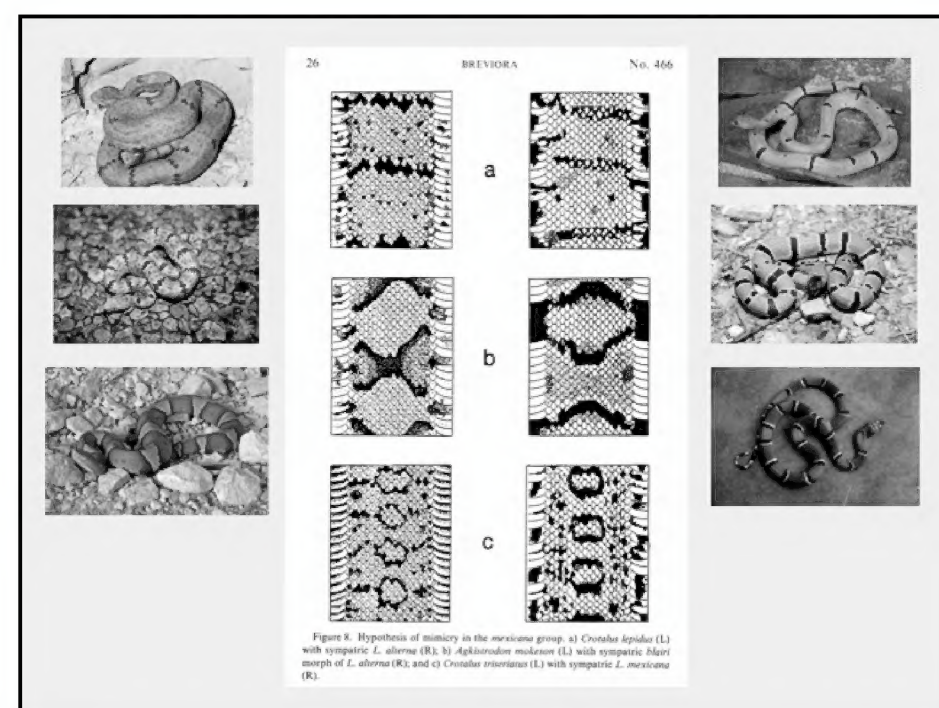
Beautiful close-ups of *Lampropeltis alterna* started his slide show, followed by a shot of him peering into the cracks of a road cut, typical *alterna* habitat. He thanked his parents for tolerating his interest in herps and dedicated his talk to biologists Andy Price and Bern Tryon, providing pictures and short biographies of them. Then he began a review of the history of *L. alterna*, taking us step-by-step through the first 15 recorded



Gerry Salmon. Photograph by Dick Buchholz.

specimens in collections throughout the U.S. The first recorded specimen was discovered in the Davis Mountains of west Texas and collected by Edmund Meyenberg during the summer of 1901. He shipped it to Arthur Erwin Brown, director of the Philadelphia Zoo, who described it as *Ophibolus alternus*. That specimen is deposited in the Academy of Natural Science in Philadelphia. The only data associated with the find were the location, sex, season and year collected. With photos of the actual specimens, tags, journal articles, and biologists, Gerry built a picture

of the natural history of *L. alterna* as the knowledge was gained. Each discovery revealed a bit more information about the animals' life. Hobart Smith found the third specimen "...in a crack in a large boulder." The seventh had the "Remains of a *Sceloporus u. consobrinus* in stomach." The eighth specimen was "found active on roadside at 10:00 P.M.," implying a nocturnal snake. Other specimens extended the range and confused the taxonomy with various morphs, but we observed the gradual revelation of the snakes' habits and habitats as Gerry took us through the first fifteen. Gerry obviously is well versed on the snakes, but he also studied the people behind the finds, continually mentioning interesting asides such as Meyenberg's death by gunshot two years after collecting the type specimen of *L. alterna*, or showing us photos of William W. Milstead's notes on collecting the eighth specimen. He gave us the story behind the continuing taxonomic confusion surrounding gray-bands and examples of the earliest and best attempts at compiling the natural history of the animal. He tracked down photos of the original specimens used to illustrate guidebooks and gave us food for thought with a proposal that the snakes are mimics of



A slide suggesting that gray-banded kingsnakes may be mimics of the venomous snakes found in the same locality. The top two photos on the left show rock rattlesnakes (*Crotalus lepidus*). At the bottom left is a trans-Pecos copperhead (*Agkistrodon contortrix pictigaster*). Photo credits: top to bottom left, Troy Hibbits, Gerry Salmon, Damon Salceies, and top to bottom right, Richard D. Worthington, Michael Geiger and Buzz Ross.





Great Plains ratsnake (*Pantherophis emoryi*). Photograph by Gerry Salmon.



Texas horned lizard (*Phrynosoma cornutum*). Photograph by Gerry Salmon.



Patch-nosed snake (*Salvadora grahamiae*). Photograph by Gerry Salmon.



Striped whipsnake (*Coluber taeniatus*). Photograph by Gerry Salmon.

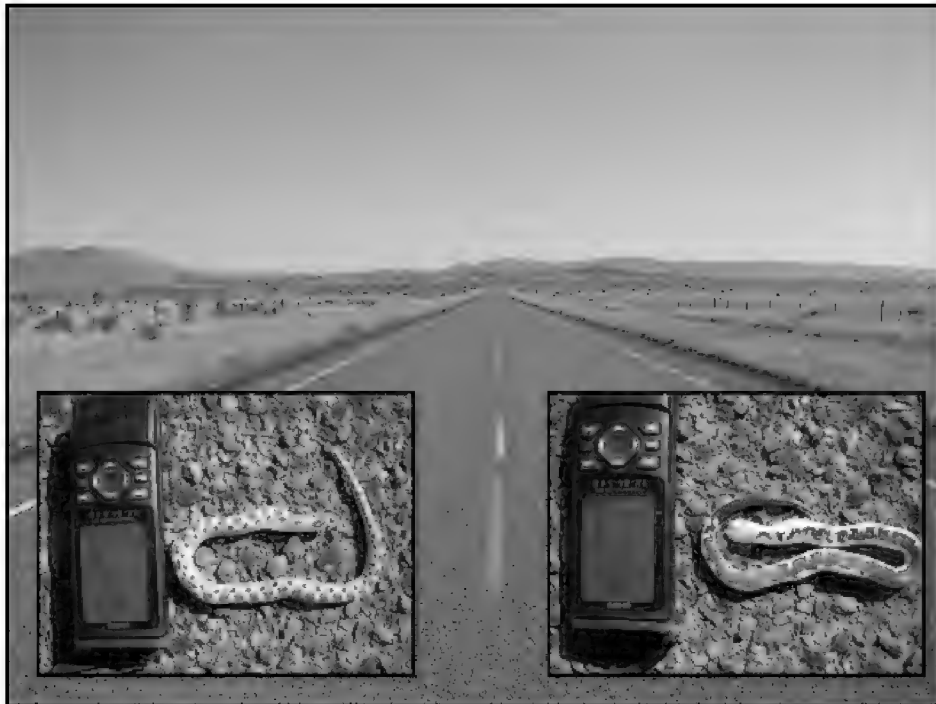


Checkered gartersnake (*Thamnophis marcianus*). Photograph by Gerry Salmon.



A clear demonstration of the variability of the gray-banded kingsnake (*Lampropeltis alterna*). All these snakes were found within ten miles of each other. Photograph by Damon Salceies.





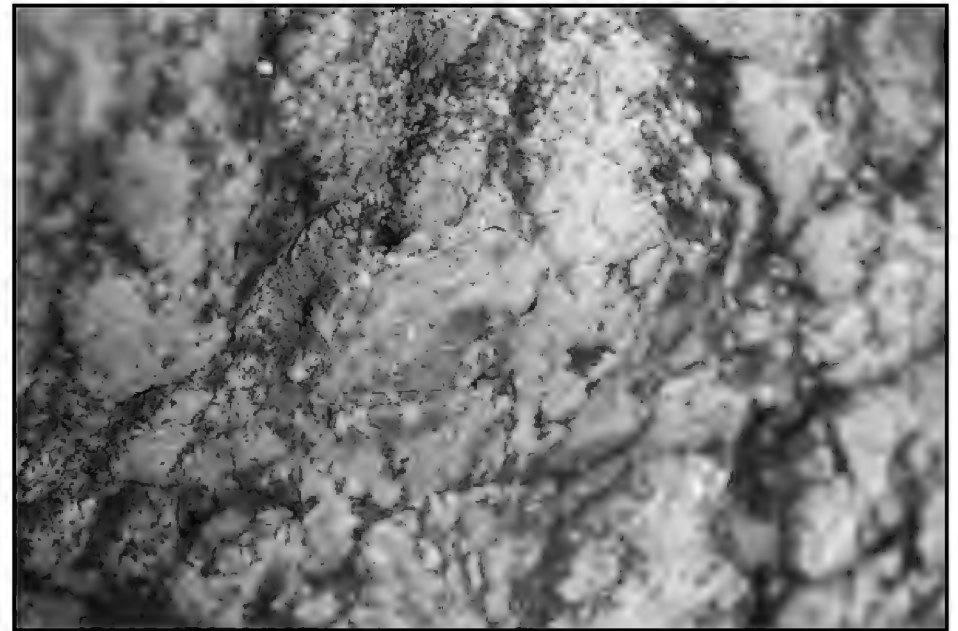
A photograph of the habitat, together with dorsal and ventral shots alongside a GPS is a reliable way to record your finds. Here the specimen is a road-killed Mexican hog-nosed snake (*Heterodon kennerlyi*). Photographs by Gerry Salmon.

the local rock rattlers (*Crotalus lepidus*) and Trans-Pecos copperheads (*Agkistrodon contortrix pictigaster*) accompanied by an excellent and convincing slide showing the similarities of the sympatric species.

We saw examples of popular articles about the snakes and pictures of the people that pursue the snakes. Gerry talked about his opinion of the Texas herping laws and the success of careful captive breeding in revealing the variable patterns of specific localities. He talked of the first “Snake Days” in Sanderson, Texas, showed the attendees and mentioned the \$5,000 raised for the underfunded state biologists in the Texas Parks and Wildlife Department. And he finished with a photo of a desert kingsnake (*Lampropeltis getula splendida*) eating a gray-band. It was staged. The gray-band was a road-kill they fed to the kingsnake, but it was still a cool photo.

He smoothly transitioned to the second part of his presentation with a photo of a black-tailed rattlesnake (*C. molossus*), followed by a map of the trans-Pecos counties in Texas and photos of the landscape and habitat, including an impressive night shot of the wild fire that ravaged the Davis Mountains two years ago. In situ shots showed how easily a western diamond-backed rattlesnake (*C. atrox*) is to identify when it’s crossing a road in daylight. Photos of cute kids holding cool animals accentuated his appeal for us to get more youngsters involved in herping. And photos of adults emphasized that not only the young are enthusiasts. A photo of a trans-Pecos ratsnake (*Bogertophis subocularis*) was followed by a wider view featuring the snake paparazzi surrounding the critter and then a photo of the paparazzi escaping the midday west Texas heat with a few drinks on the porch of their hotel. A composite slide showing habitat and dorsal and ventral views with a GPS of a DOR hognose illustrated Gerry’s appeal for all herpers to keep careful documentation while in the field. Evidence well recorded can be valuable to many researchers.

A yellow mud turtle (*Kinosternon flavescens*) showed that the desert is not all dry. A Chihuahuan spotted whiptail lizard (*Aspidoscelis exsanguis*) and a crevice spiny lizard (*Sceloporus poinsettii*) grabbed our attention. With a Texas horned



A well camouflaged canyon treefrog (*Hyla arenicolor*). Photograph by Gerry Salmon.

lizard (*Phrynosoma cornutum*) on the screen Gerry mentioned that their numbers are declining rapidly perhaps due to changes in the ants that are their food source. Gerry showed a few slides highlighting the amazing camouflage capabilities of the canyon treefrog (*Hyla arenicolor*) and numerous photos of rattlesnakes, including black-tailed, prairie (*C. viridis*), rock, and Mojave (*C. scutulatus*) rattlers. A ventral shot of a Trans-pecos copperhead showed why the subspecies’ Latin name is *pictigaster*, meaning a painted or embroidered belly. A beautiful red and black long-nosed snake (*Rhinocheilus lecontei*) filled the screen followed by a green Couch’s spadefoot (*Scaphiopus couchii*). He ended with a photo of Mike Price pointing to a gorgeous gray-band on a rock wall and a last slide of a beautiful west Texas rainbow.

Gerry mentioned at the beginning of his talk that he had accumulated enough info for this talk that he could write a book. He knew that he’d gone too far when his hard drive crashed. Taking that as a hint, he scaled back the talk. He covered the natural history of the gray-banded kingsnake and herping in the trans-Pecos region, but he also talked about much more. He spoke about the importance of involving children in the herpetology. He gave us background on many famous and lesser-known biologists. He showed how we can make a difference in the public’s perception of these animals by collectively engaging in efforts like the Snake Days in Sanderson, Texas. He managed to give us a taste of how science gradually expands our knowledge through bits of data and he encouraged us to help collect that data by demonstrating how even we amateurs can collect meaningful data. And that was after he shortened his presentation. We’re going to have to have him back for the rest.



## Herpetology 2013

In this column the editorial staff presents short abstracts of herpetological articles we have found of interest. This is not an attempt to summarize all of the research papers being published; it is an attempt to increase the reader's awareness of what herpetologists have been doing and publishing. The editor assumes full responsibility for any errors or misleading statements.

### EVIDENCE OF SNAKE DECLINES

G. C. Akani et al. [2013, *Herpetozoa* 25(3/4):133-142] note that recent studies suggest that snakes are widely declining in at least three continents, and that this decline has targeted some species of tropical Nigeria, West Africa. To describe the possible interrelations among different causes and the boundary conditions to forecast snake decline, the authors explored local communities' ecological knowledge in this respect, i.e., that cumulative body of knowledge and beliefs concerning snakes, shared in the human community by cultural transmission, thus constituting the social memory. The authors describe a survey-based participatory approach to reinforce the scientific analyses of snake declines in the River Niger Delta, where significant snake declines have been detected over the last decade. They compared the results of two questionnaire-based surveys (the first in 1996–1997 and the second in 2011–2012) to farmers and hunters in a same set of 41 villages. The standardized questionnaire consisted of two parts: (i) a section with general questions on the personal attitude of the respondent toward snakes, and (ii) a section with three questions on perceived snake diversity, habitat, and current abundance around the villages of those interviewed. Three main patterns emerged: (1) the social shared role (value and dangerousness) of snakes in the rural communities was constant in the last 15 years; (2) some species were perceived as declining; and (3) the habitat - species relationships are slightly changed. The implications of these patterns are discussed, given that several aspects of the perceived changes in population abundances of targeted snakes were indeed consistent with herpetological scientific data from the field.

### GUIDE TO STUDYING MALFORMED AMPHIBIANS

K. B. Lunde and P. T. J. Johnson [2012, *J. Herpetology* 46(4): 429-441] review field-based surveys and experimental approaches used over the last decade to address the issue of severely malformed amphibians. The authors offer specific recommendations regarding amphibian-sampling techniques, including methods to capture and examine amphibians, with the aim of enhancing the accessibility of this topic to scientists, students, and educators of diverse backgrounds. Based on established approaches from epidemiology, they provide recommendations regarding methods to identify proximate causes(s) of abnormalities with a focus on using "multiple lines of evidence," including large-scale field surveys, comparing malformation "signatures" between field and laboratory studies, and using of manipulative experiments at multiple spatial scales. As an example, they describe methods to examine the causal influence of infection by the trematode parasite, *Ribeiroia ondatrae*, including quantifying presence and abundance within amphibian and snail host populations with adequate power of detection. The authors conclude by identifying outstanding questions with the goal of stimulating additional research to evaluate the causes and consequences of amphibian malformations.

### HITTING THE GROUND RUNNING

J. S. Doody and P. Paull [2013, *Copeia* 2013(1):160-165] note that evidence is accumulating for the ability of animal embryos to hatch early in response to the immediate threat of egg predation. However, early hatching in response to predation is known from only amphibians, fish, and invertebrates. This study presents the first quantitative evidence for induced early hatching in a reptile. In two laboratory experiments, delicate skink (*Lampropholis delicata*) embryos responded to a surrogate predator cue—vibrations—by hatching 3 days earlier than their spontaneously hatching clutchmates. Early hatching embryos were significantly smaller and left more residual yolk in their eggs, however, suggesting a cost to hatching early. Assuming that the vibrations were interpreted as an increase in predation risk, skink embryos can thus forego some yolk absorption and growth when threatened by imminent predation. Simulated predation experiments in the field induced hatching in both nest sites (horizontal rock crevices) and in eggs displaced from nest sites. The hatching process was explosive: early hatching embryos hatched in seconds and sprinted from the egg an average of 40 cm as they hatched. These results are unusual in demonstrating early hatching in a terrestrial animal with a simple life cycle, and likely extend predation-induced early hatching to reptiles. Early hatching may be widespread in oviparous vertebrates.

### SPATIAL ECOLOGY OF ARMENIAN VIPERS

J. A. Ettling et al. [2013, *Copeia* 2013(1):64-71] note that Armenian vipers (*Montivipera raddei*) have a restricted and fragmented distribution throughout portions of Armenia, eastern Turkey, and northwestern Iran. Over the past 40 years their population numbers have dropped by nearly 88% due to a combination of over-collection for the pet trade, conversion of habitat to agriculture, and overgrazing by livestock. While a few studies have examined aspects of their reproductive biology, very little is known about the spatial ecology of this species. The authors used radiotelemetry to study the spatial ecology and habitat use of Armenian vipers inhabiting a landscape modified by human use in Kotayk Province, Armenia, during the spring seasons of 2007–2009 (17 males, 11 females) and for complete active seasons in 2008 and 2009 (8 males, 6 females). They found no significant difference between sexes for home range size, average movements, or movement rates through areas involving cropland versus strictly steppe. Home ranges were significantly larger for males whose spring core area included some cropland. Both sexes showed significant preference for mountain steppe over cropland. Despite these differences, the interspersing of cropland among steppe habitat does not appear to impede the snakes' movements and seasonal use of the available habitat. While conservation of intact mountain steppe habitat is the ultimate goal, providing corridors of habitat in areas of agricultural development should be considered a high priority for managing this viper population into the future.



## CORAL SNAKE REPRODUCTIVE STRATEGIES

O. A. V. Marques et al. [2013, *Herpetologica* 69(1):58-56] note that New World coral snakes (genus *Micrurus*) occur from North to South America in a wide range of climates and habitats. Using both original and published data, they show that reproductive patterns diverge in the two phylogenetic lineages of *Micrurus* within the subtropical regions. Species with black rings arranged in triads are characterized by males larger than or equal in size to females, male combat behavior, and a broader season of vitellogenesis and oviposition. In these species, mating in autumn is synchronous with both spermatogenesis and vitellogenesis. Thus, females need to store sperm until ovulation in spring. In species with black rings arranged in monads, females are generally larger than males, there is no male-male combat, and seasonal vitellogenesis occurs in spring synchronous with mating. Egg laying occurs from late spring to summer, and hatchlings emerge from late summer to autumn. Spermatogenesis peaks during autumn, and males store sperm in the deferent duct over winter, until the mating season. Despite these phylogenetic trends, climatic influence on the extension of reproductive cycles was evident, with equatorial species exhibiting more continuous cycles and species from cold areas exhibiting more seasonal cycles. These two disparate reproductive strategies may be considered another differential trait between these two clades of *Micrurus* showing the high divergence between them.

## SAW-SCALED VIPER HABITAT CHOICE

R. Yosef et al. [2012, *J. Herpetology* 46(4):671-674] hypothesized that Palestine saw-scaled vipers (*Echis coloratus*) select ambush sites that allow them to remain in a relatively cooler microclimate. During spring 2010, the authors located 27 vipers in the Eilat Bird Sanctuary, Israel. Twenty-six (96%) vipers were recorded in 15 *Salvadora persica*, one (4%) in *Zygo-phyllum dumosum*, and none in *Ochradenus baccatus*. The temperature at the base of the *S. persica* was on average 6°C lower than in *O. baccatus*. It was also found that the greater the apron radius of *S. persica*, the lower the temperature in the bush, and that bushes of *S. persica* occupied by vipers, have greater apron radius than those without snakes. Each of the snakes remained in the bush in which it was found during the whole three months of the study. The authors conclude that the cues used by *E. coloratus* for predicting future prey availability seem to be the structure of the microhabitat rather than prey odor. This study is of conservation importance and enhances understanding of habitat choice in this little-studied snake.

## EUROPEAN POND TURTLE REPRODUCTION

S. Mitrus et al. [2012, *The Herpetological Journal* 22(4):235-239] analyzed long-term (1987–2011) data on the reproduction of the European pond turtle, *Emys orbicularis*, in western and central Poland. In contrast to earlier evidence, which suggested that *E. orbicularis* rarely reproduces successfully in the northern part of its distribution area, the authors document successful reproduction in at least 16 out of the last 20 seasons, including annual reproduction since 1998. Hatchlings emerge either in late summer or autumn, or overwintered in nests and emerged between late February and May of the following year.

## GOPHER FROG CONSERVATION

W. J. Humphries and M. A. Sisson [2012, *J. Herpetology* 46(4): 665-670] note that the gopher frog, *Lithobates capito*, is an endemic to upland, fire-maintained pine forests on the Southeastern Coastal Plain and requires open, isolated wetlands for breeding. This species has experienced drastic population declines because of habitat loss and degradation and now occurs only in scattered populations in the southern United States. The authors tracked the post-breeding movements and burrow use of 17 gopher frogs in the Sandhills of North Carolina using radio telemetry. Nine frogs were successfully tracked to summer refugia; the other eight frogs shed their transmitters or were killed by predators or fire during migration. Frogs traveled 0.5–3.5 km (mean = 1.3 km) between the breeding pond and a summer refugium. The 3.5-km movement is substantially longer than has been reported for gopher frogs before. The results suggest that an area of 3,739 ha (9,239 acres) around breeding ponds is required to provide summer habitat for gopher frogs. Eight of nine frogs used holes associated with the stumps of longleaf pines for their summer refugia, and fidelity to particular stumps was documented, with one frog traveling long distances from breeding pond to the same summer refugium during two consecutive seasons. Frogs only made major movements during rainy nights. Prolonged presence on the forest floor during post-breeding migrations exposed frogs to prescribed fires conducted in the spring. Prescribed burning within several kilometers of gopher frog ponds should be conducted after mid-May to reduce adult mortality.

## DIETARY OVERLAP BETWEEN CAIMAN SPECIES

T. M. Laverty and A. P. Dobson [2013, *Herpetologica* 69(1):91-101] note that the black caiman (*Melanosuchus niger*) experienced a dramatic population decline in the mid-20th century, becoming extinct or locally rare over most of its range due to habitat destruction and the commercial value of its hide. As the success and re-establishment of the species is now dependent on conservation efforts throughout the Amazon basin, black caimans require continuous monitoring despite extensive current legal protection. Although such efforts have mitigated the threat of human harvesting, a key issue facing the species today is ecological competition from sympatric spectacled caimans (*Caiman crocodilus*). This study investigated this inferred competition by detailing the dietary overlap between black caimans and spectacled caimans in the Pacaya Samiria National Reserve in 2009. Using an adaptation of the hose-Heimlich technique, the stomach contents of several individuals of each species were collected and then compared. It was found that although the proportions of prey items in their stomach contents varied seasonally, the dietary overlap between the two species remained high, suggesting intense competition for food resources. In addition to seasonal changes, the diet composition of black caimans also shifted ontogenetically. Young black caimans primarily ate insects and crustaceans, whereas larger individuals mostly preyed on fish, reducing intraspecific competition between crocodilian adults and young. These findings suggest that spectacled caimans will continue to hinder the recovery of the black caiman population.



## HEALTH ASSESSMENT OF MASSASAUGAS

M. C. Allender et al. [2013, Copeia 2013(1):97-102] note that with the current rate of declines in global biodiversity, wildlife diseases are serving as additional threats to population declines and potentially species extinctions. Free-ranging eastern massasaugas (*Sistrurus catenatus catenatus*) have been reported susceptible to numerous health threats, one of which is a fatal fungal dermatitis. In response to the occurrence of the fungal dermatitis, a health survey and disease investigation was conducted on eastern massasaugas near Carlyle, Illinois, in 2011. Thirty-eight eastern massasaugas were captured from March to April 2011. Polymerase chain reaction assays were performed from swabs collected from the faces of 34 snakes. The study resulted in hematologic data for 31 individuals, plasma biochemical data for 24, and toxicological data for 18. There was no evidence of *Chrysosporium* in any of the samples. Hematologic and plasma biochemistry parameters were consistent with previous health studies in the Carlyle population. Elemental toxicologic investigation of the plasma indicated variable levels of lead, copper, selenium, strontium, tin, iron and zinc.

## DECLINE AND FLOUNDER OF A TOAD POPULATION

T. Beebee [2012, The Herpetological Bulletin (121):6-16] notes that common toads (*Bufo bufo*) have declined over much of southern and eastern England in recent decades. One such toad decline, at Offham marshes in Sussex, was investigated over the 15-year period 1998–2012 immediately subsequent to a tenfold decrease in population size between 1989 and 1997. Syntopic amphibians (*Rana temporaria*, *Lissotriton vulgaris* and *L. helveticus*) probably also declined at this site. The surviving toad population continued to recruit new cohorts and had an apparently healthy age structure. Habitat quality (aquatic and terrestrial) remained good and there was no evidence of disease. An invasive species (*Pelophylax ridibundus*) was excluded as a likely cause of toad decline. However, traffic on a neighboring road rendered more than half the previously available terrestrial habitat essentially unreachable. Furthermore, reduced management of vegetation in ditches where the toads breed apparently increased mortality of developing tadpoles. Future prospects for conserving and increasing the toad population are discussed.

## EFFECTS OF HARVESTING ALLIGATOR SNAPPERS

C. A. F. Howey and S. A. Dinkelacker [2013, Copeia 2013(1):58-63] note that following perturbations like commercial harvests, turtles are susceptible to population declines because of life history characteristics such as long generation times, low recruitment rates, delayed maturity, and slow growth rates. Prior to gaining state-wide protection in 1993, the alligator snapping turtle (*Macrochelys temminckii*) was commercially harvested in Arkansas. The authors conducted a mark-recapture study from 2005 through 2007 on a population of *M. temminckii* known to have been harvested in the East Fork Cadron Creek, a slow-moving stream in central Arkansas and part of the Mississippi River drainage. Captured turtles were marked, measured, weighed and sexed. The authors compared observed characteristics to what would be expected if this population did not exhibit any evidence of past commercial harvest. They caught few large

adults and approximately one adult for every juvenile. The adult sex ratio was highly female biased (6 F:1 M). Population density (18 turtles/km stream reach) was slightly lower than expected. The apparent survivorship for males (0.96), females (0.88), and juveniles (0.80) appear to be as expected for a large freshwater turtle. Whereas high survivorship may ameliorate the effects of historical commercial harvest, slow growth rates, low reproductive success, and long generation times have assured these effects to be long lasting and still present in the study population. The authors suggest other factors impeding recovery, such as life history characteristics and incidental catch by fishermen.

## HARVEST OF ENDANGERED SIDENECKS

C. L. Peñaloza et al. [2013, Copeia 2013(1):111-120] quantified illegal and unmonitored harvest of three endangered sideneck turtles (*Podocnemis* spp.) by examining discarded turtle shells in 29 riverine communities both up- and down-river from the Arrau Turtle Wildlife Refuge in the Middle Orinoco, Venezuela. They compared harvested turtle sizes to those captured during in-water research surveys to determine harvest selectivity. Fresh sideneck turtle shells were found in most communities visited; carapaces and plastrons from *P. expansa* were the most abundant despite their protected status. Turtle harvest was skewed toward females in all species, and toward juvenile *P. expansa* and adult *P. unifilis* and *P. vogli*. Considering historical accounts of widespread turtle husbandry in the area, *Podocnemis* spp. life history, and population recovery for these species in community-based conservation programs elsewhere in South America, the authors recommend community-managed captive breeding of faster-maturing *P. unifilis* and *P. vogli* to satisfy turtle consumption needs. These measures, along with improved nesting-beach protection, may allow recovery of populations of *P. expansa* and make possible their legal subsistence harvest in the future.

## CHYTRID FUNGUS IN ETHIOPIA

D. J. Gower et al. [2012, The Herpetological Journal 22(4):225-233] note that surveys of the potentially lethal amphibian chytrid fungus (*Batrachochytrium dendrobatidis* - *Bd*) in Africa are patchy, especially in some regions of high species endemism. The authors present results of the first *Bd* surveys of wild amphibians in Ethiopia, for two upland regions on either side of the Rift Valley: the Bale Mountains and the Kaffa region. Surveys were opportunistic so that robust interpretation of the data is limited. Utilizing diagnostic qPCR assays, 51 out of 120 frogs (14 species in 10 genera) tested positive for *Bd* at altitudes of 1,620–3,225 m, across all genera and species, and all but two localities. Prevalence was not significantly different between the two regions or two years (2008, 2009) sampled. Prevalence and parasite load was higher in species with aquatic tadpoles than those with terrestrial early life-history stages, but these differences were not significant. Impacts of *Bd* infection were not investigated, but no dead or dying frogs were found. This is the first report of *Bd* in Ethiopia, a country in which approximately 40% of its more than 60 species are endemic. Declines have occurred in some frog species in some localities in Ethiopia, and although habitat degradation is a likely cause in at least some places, further studies of *Bd* in Ethiopia are required to understand if it is a threat.



## Unofficial Minutes of the CHS Board Meeting, March 15, 2013

The meeting was called to order at 8:05 P.M. at the Schaumburg Public Library. Board members Stephanie Cappiello, Mike Dloogatch, Jason Hood, Nancy Kloskowski and Andy Malawy were present. A quorum was not present

### Officers' Reports

Recording Secretary: Mike Dloogatch read the minutes of the February 15 board meeting.

Treasurer: Andy Malawy went over the February financial reports.

Membership Secretary: Mike read a list of expiring memberships and said we are steady around 500 people

Sergeant-at-arms: Jim Foster was not present, but told Jason there were 30 people at the February meeting

### Committee Reports

Shows:

- Notebaert Nature Museum, first full weekend of each month.

ReptileFest: Jason Hood is looking for a vendor to supply live plants. Jason also reported that this year we will advertise in *Family Time Magazine* as well as *Chicago Parent*.

### Old Business

The CHS was able to arrange for 3,000 cards advertising 'Fest to be put into Kids Expo bags.

Business cards, a banner and a poster board have been made for the Junior Herpers.

The CHS has purchased a new Windows7-based computer. Thanks to John Archer for taking care of this. We are still

planning to purchase a new projector and a cordless microphone.

Jason emphasized that we should be promoting the Midwest Herp Symposium, August 31–September 3, in Peoria and the International Herp Symposium, July 31–August 3, in New Orleans.

### New Business

Those present discussed SB2362, a bill before the Illinois senate that is intended to replace all existing laws pertaining to reptiles and amphibians.

It was decided to cancel the April board meeting because of the conflict with ReptileFest.

Jason announced that Grossboy Exotics will be selling frozen rodents at general meetings

### Round Table

John Archer's daughter Grace was accepted into the University of Illinois Vet School.

Roy Carlson and Teresa Savino have one last tuition payment for daughter Rosalie.

Jason is happy that we finally have the new banners.

Linda Malawy reported by telephone that our booth at the Chicagoland Family Pet Expo was going well.

The meeting was adjourned at 9:34 P.M.

*Respectfully submitted for the recording secretary by Stephanie Cappiello*



**THE  
GOURMET  
RODENT,  
INC.™**



**RATS AND MICE**

**Bill & Marcia Brant**

P.O. Box #430  
Newberry, FL 32669-0430

(352) 472-9189  
FAX: (352) 472-9192  
e-mail: GrmtRodent@aol.com



## Advertisements

For sale: rats and mice—pinkies, fuzzies and adults. Quantity discounts. Please send a SASE for pricelist or call Bill Brant, *THE GOURMET RODENT*, PO Box 430, Newberry, FL 32669-0430, 352-472-9189, E-mail: [GrmtRodent@aol.com](mailto:GrmtRodent@aol.com).

For sale: **highest quality frozen rodents**. I have been raising rodents for over 30 years and can supply you with the highest quality mice available in the U.S. These are always exceptionally clean and healthy with no urine odor or mixed in bedding. I feed these to my own reptile collection exclusively and so make sure they are the best available. All rodents are produced from my personal breeding colony and are fed exceptional high protein, low fat rodent diets; no dog food is ever used. Additionally, all mice are flash frozen and are separate in the bag, not frozen together. I also have ultra low shipping prices to most areas of the U.S. and can beat others shipping prices considerably. I specialize in the smaller mice sizes and currently have the following four sizes available: Small pink mice (1 day old—1 gm) , \$25 /100; Large pink mice (4 to 5 days old—2 to 3 gm), \$27.50 /100; Small fuzzy mice (7 to 8 days old—5 to 6 gm) , \$30/100; Large fuzzy mice /hoppers (10 to 12 days old—8 to 10 gm), \$35/100 Contact Kelly Haller at 785-234-3358 or by e-mail at [kelhal56@hotmail.com](mailto:kelhal56@hotmail.com)

For sale: High quality, all locally captive-hatched tortoises, all bred and hatched here in the upper midwest. Baby leopards, Sri Lankan stars, and pancakes usually available, and are all well-started and feeding great! Leopards are \$125 ea., Sri Lankans (2012 hatched) \$475 ea. And Pancakes are \$195 ea. Leopards for out of state sale/shipping require a veterinary health certificate (inquire for cost). E-mail at [KKranz1@wi.rr.com](mailto:KKranz1@wi.rr.com) or call Jim or Kirsten at 262 654 6303.

Herp tours: **Costa Rica herping adventures**. Join a small group of fellow herpers for 7 herp-filled days. We find all types of herps, mammals, birds, and insects, but our target is snakes. We average 52 per trip, and this is our 10th year doing it. If you would like to enjoy finding herps in the wild and sleep in a bed at night with air-conditioning, hot water and only unpack your suitcase once, instead of daily, then this is the place to do it. Go to our web-site <http://hiss-n-things.com> and read the highlights of our trips. Read the statistics of each trip and visit the link showing photos of the 40 different species we have found along the way. E-mail at [jim.kavney@gmail.com](mailto:jim.kavney@gmail.com) or call Jim Kavney, 305-664-2881.

Summer Herpetological Field Classes: Research 4 Reptiles, LLC, has openings for ages 12 years to adult for herpetological field classes. Assist in real research studies and learn species identification, capture techniques, and data collection. All classes are limited to 8 individuals and are taught entirely outdoors at pond/prairie sites within Midewin National Tallgrass Prairie in Wilmington, Illinois. Registration details and class information can be found on our website at <http://www.research4reptiles.biz>. For questions, email Holly Zak at [research4reptiles@comcast.net](mailto:research4reptiles@comcast.net) or call 630-337-0757.

Line ads in this publication are run free for CHS members — \$2 per line for nonmembers. Any ad may be refused at the discretion of the Editor. Submit ads to [mdloogatch@chicagoherp.org](mailto:mdloogatch@chicagoherp.org).

From the company that developed the **first UVB lamp** for reptiles 20 years ago...

# T5 HO UVB



**NEW**

**2x the UVB & Light Output!**

**European Quality  
Made in Germany**



Only 1 1/8" thick

**Low Profile  
T5 HO Terrarium  
Hoods Available**



**ZOO MED LABORATORIES, INC.**  
3650 Sacramento Dr.  
San Luis Obispo, CA 93401 U.S.A  
Email: [zoomed@zoomed.com](mailto:zoomed@zoomed.com)

**[www.zoomed.com](http://www.zoomed.com)**



## News and Announcements

### INDIANAPOLIS ZOO TRIP

On Saturday, **May 11, 2013**, your Chicago Herpetological Society is offering members a behind-the-scenes visit to the Indianapolis Zoo. We will meet at the zoo Saturday morning; no group transportation provided. Purchased in advance, our discounted rate for admissions is: **\$13.50 per adult, and \$9.50 for children 2–12**. The discounted parking rate is **\$ 5.00 per vehicle**. Space is limited. The operating hours are 9–5 on Saturday. Go to [indyzoo.com](http://indyzoo.com) for in-depth information regarding the zoo experience. More information will follow; please watch the CHS Facebook page for updates. Private tour times not yet determined, but will be around noon to 1:00 P.M. start time. To reserve space and purchase discounted tickets, **contact Linda at 630-717-9955**.

### Deserts Biome

The zoo is known worldwide for its successful research and for breeding of some of the rarest desert reptiles. The Indianapolis Zoo was the first zoo in the world to successfully breed the extremely endangered Grand Cayman blue iguana and is the only zoo to successfully breed the rare Jamaican iguana. The attention to detail in the Deserts Biome sets it apart from other desert exhibits across the nation. The 80-foot diameter transparent dome allows the animals to bask in natural sunlight year-round while heating and air conditioning vents hidden in the rocks keep the temperature in the 80s.

The Zoo's overall goal to immerse visitors in the natural habitats of its animals was firmly in mind when designing the Deserts Biome, which opened in 1990. Zoo staff spent two weeks in Tucson, Arizona, making rubber molds of actual rocks that decorate the Deserts Biome. The granite gravel lining the floor of the exhibit was trucked in from Arizona, and the giant sculpted rocks were painted to match the color of the gravel. The rocks are situated to form a canyon and river and to create a walkway through the dome for visitors. Larger animals are behind glass in the exhibit areas, but the birds and smaller lizards roam freely throughout the dome. If a lizard finds itself in the middle of a turf battle or being pursued by a rambunctious young visitor, it can take cover in one of 75 "hide tubes" throughout the dome. The tubes are made of drainage piping built into the rocks and lined with gravel to provide traction.

About 250 species of plants, several of which are endangered, flourish in the biome. Planters constructed inside the rocks give the appearance that the plants grow from within the terrain. All of the plants in the biome are living and cared for daily by the horticulture staff. The temperature in the deserts dome is regulated at 85° in the summer and 82° in the winter. It is lowered to simulate a seasonal change and encourage some of the animals to maintain their hibernation schedule just as they would in the wild. Some animals, like the endangered desert tortoise, need even lower temperatures to hibernate. For the tortoises' winter nap, keepers settle them into a special refrigerator off exhibit to sleep at a chilly 55° until spring. The Deserts Biome is home for another species of tortoise, the radiated tortoise of Madagascar. In late 1995, the zoo was first successful in breeding this endangered tortoise, and many more have been born since.

### Drop Dead Gorgeous Snakes

Opened in June 2000 inside the Deserts Dome, this permanent exhibit presented by AT&T Advertising Solutions features some of the most gorgeous—and deadly—snakes on the planet. In the "Snakes as Art" gallery, the exhibit includes 13 of the most beautiful snakes in the world highlighted with pinpoint fiber optics as they rest in "jewel box" cases. A curving "habitat wall" highlights a second gallery—a collage of spectacular images showing the many different kinds of snakes and the myriad environments in which they can be found. Visitors may sit on a full-size model of the world's largest snake—a 33-foot-long version of a reticulated python with a body fully 16 inches in diameter.

The "Snakes and People" gallery, where the many myths that surround these creatures are exploded, is one of the most important parts of the exhibit. The focus is on how snakes are cared for in the zoo and on some of the key research and conservation programs in which zoos throughout the world are engaged.

See [indyzoo.com](http://indyzoo.com) for more enticement!



## UPCOMING MEETINGS

The next meeting of the Chicago Herpetological Society will be held at 7:30 P.M., Wednesday, April 24, at the Peggy Notebaert Nature Museum, Cannon Drive and Fullerton Parkway, in Chicago. **Dan Krull**, of Shawnee, Kansas, will speak about how the state of Kansas has been benefiting from the efforts of citizen scientists. The talk will explain in some detail how amateur herpers can provide valuable data and even tissue samples. Dan is familiar to many of you as a talk show host for Herp Nation Media.

At the May 29 meeting **Russ Gurley**, founder of the Turtle and Tortoise Preservation Group, will speak on a topic relating to chelonians.

The regular monthly meetings of the Chicago Herpetological Society take place at Chicago's newest museum—the **Peggy Notebaert Nature Museum**. This beautiful building is at Fullerton Parkway and Cannon Drive, directly across Fullerton from the Lincoln Park Zoo. Meetings are held the last Wednesday of each month, from 7:30 P.M. through 9:30 P.M. Parking is free on Cannon Drive. A plethora of CTA buses stop nearby.

### Board of Directors Meeting

Are you interested in how the decisions are made that determine how the Chicago Herpetological Society runs? And would you like to have input into those decisions? If so, mark your calendar for the next board meeting, to be held at 7:30 P.M., May 17, in the adult meeting room on the second floor of the Schaumburg Township District Library, 130 S. Roselle Road, Schaumburg..

### The Chicago Turtle Club

The monthly meetings of the Chicago Turtle Club are informal; questions, children and animals are welcome. Meetings normally take place at the North Park Village Nature Center, 5801 N. Pulaski, in Chicago. Parking is free. For more info visit the group's Facebook page.

## THE ADVENTURES OF SPOT





Periodicals Postage  
Paid at Chicago IL

# CHICAGO HERPETOLOGICAL SOCIETY

*Affiliated with the Chicago Academy of Sciences*

---

2430 North Cannon Drive • Chicago, Illinois 60614

---